架構於密鑰相依轉換之數位浮水印系統

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摘 要

在數住時代的來臨，數位資訊、數位照片廣泛地透過網際網路在世界各地非法地複製、傳播，數位資訊之智慧財產權的問題日趨 重要。我們可以使用數位浮水印技術將浮水印藏於數位影像中藉以宣告擁有者之著作權。浮水印藏入頻域影像中，較能抵抗壓縮攻 擊，但若頻域的轉換基底是公開的，如:DCr轉換，攻擊者可循此基底轉換而破壞頻域中之浮水印。 因此本論文的目的在提出一個強健性且機密的浮水印系統，為了提高藏入浮水印之安全，性，進而使藏入之浮水印能夠忍受攻擊。 所以，我們提出一個以密鑰建立正規正交之轉換基底來使用於浮水印系統中的轉換基底，並提出方法設計使基底具有從低頻到高頻分 佈的特性。 至於浮水印藏入的部份則是利用此組密鑰相依的基底來將數位影像由空間域轉到頻率域並將浮水印藏於低頻部份後利用反轉 公式轉回空間域，此即完成浮水印的藏入。浮水印取出部份，也是利用相同的密鑰，"系統產生出相同於藏入時的轉換基底，藉以取出正確的浮水印。 實驗結果証明我們所提出的方法對於壓縮攻擊具有不錯的效果。

關鍵詞 : 數位浮水印，正規正交矩陣，密鑰轉換，不需原圖之浮水印技術，密鑰相依基底轉換

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